

Remarks

Claims 1 through 6, 10 through 16 and 21 through 24 are now pending.

Claims 7 through 9 and 17 through 20 have been cancelled.

Claims 1 through 3, 5, 15 and 16 have been amended.

New claims 21 through 24 have been added.

In particular, claim 1 has been amended to provide that silanol and siloxane groups on the domains on the surface of the functionalized carbon black are optional. Therefore the silanol and siloxane groups on the domains are to be used *in addition to* one or more of the other groups on the domains.

It is to be appreciated that claims 2 and 3 have been amended to require that the domains on the surface of the functionalized carbon black are exclusive of silanol and siloxane groups.

It is to be appreciated that new claims 21 through 24 are, directly or indirectly, dependent from amended claims 2 and 3, as well as amended claims 15 and 16, and such claims therefore require that the domains on the functionalized carbon black are exclusive of silanol and siloxane groups.

The Rejection

The following U.S. patents have been relied upon to reject various of the Applicants' claims:

EP1,010,718	Gorl (U.S. equivalent 6,433,064)
U.S. 5,869,550	Mahmud
U.S. 6,136,919	Zimmer

First Rejection

Claims 1, 3, 5, 7,8 and 10 have been rejected under 35 U.S.C. Section 102(b) as being anticipated by Gorl. Please note that U.S. Patent No. 6,433,064 is apparently equivalent to the cited EP1,010,718 patent. For purposes of this Response and for convenience of working with an English language, the elements of U.S. Patent No. 6,433,064 to Gorl may be referred to where indicate.

Second Rejection

Claims 6 and 9 have been rejected under 35 U.S.C. Section 103(a) over Gorl.

Third Rejection

Claims 11 through 20 have been rejected under 35 U.S.C. Section 103(a) over Gorl in view of Mahmud.

Fourth Rejection

Claims 2 and 4 have been rejected under 35 U.S.C. Section 103(a) over Gorl in view of Zimmer.

The rejection of the Applicants' claims, particularly the amended claims, is traversed with a request for reconsideration in view of comments herein.

The Invention

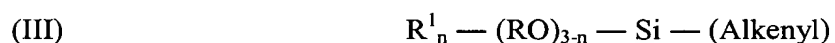
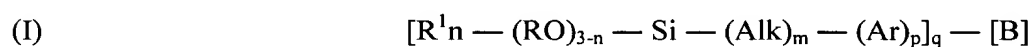
It is important to appreciate that the invention of the Applicants' claims is directed to preparing a masterbatch of carbon black and elastomer by a process of blending a pre-functionalized carbon black with at least one elastomer in a low shear, aqueous or organic solvent medium. The pre-functionalized carbon black is presented as a carbon black which contains specified types of domains on its surface which are intended to make the carbon black more hydrophilic to enhance the blending thereof with a diene-based elastomer (Page 1, Lines 29 through 33) and to promote covalent bonds between the functionalized carbon and host polymer particularly for use in the masterbatching dispersion procedure of the Applicants' invention (Page 3, Lines 3 through 6).

In particular, amended claim 1 now presents the inclusion of silanol and/or siloxane groups on the domains on the surface of the pre-functionalized carbon black as being optional and if used, are present *in addition to* one or more of the other required domains.

As hereinbefore pointed out, amended claims 2 and 3, as well as amended claims 15 and 16 and, further, new claims 21 through 24, require that the domains on the surface of the functionalized carbon black are exclusive of silanol and siloxane groups.

First Rejection (Claims 1, 3, 5, 7, 8 and 10 under 35 U.S.C. Section 102(b))

The Gorl reference is directed to particulate rubber which contains a filler where the particulate rubber can be used for the production of vulcanizable rubber mixtures. The fillers comprise silicas and carbon blacks which are optionally modified with organosilicon compounds of the formulae (I), (II) or (III) (Column 3, Lines 37 through 45 of U.S. Patent No. 6,433,064):



Bis(trialkylsilylalkyl) tetrasulfane and disulfane types are reported as being suitable for pre-modification of the fillers (Column 4, Lines 8 through 10 of U.S. Patent No. 6,433,064).

It is not clear as to whether the formula (I), (II) or (III) produces a silanol or siloxane domain on the surface of the carbon black.

However, nevertheless, the Applicants' amended claims now require that silanol and siloxane group based domains on the surface of the carbon black are excluded or optional and, if used, is/are in addition to one or more of the other required domains on the carbon black's surface.

Claims 2, 3, 15, 16 and 21 through 24 specifically exclude silanol and siloxane domains from the surface of the carbon black. It is not seen that Gorl teaches or suggests any carbon black having any of Applicants' other domains on its surface as is required by the Applicants' claims.

Accordingly, it is contended that Gorl is significantly and materially deficient for rejecting the Applicants' amended claims as being anticipated thereby under 35 U.S.C. 102(b) and as being obvious under the requirements of 35 U.S.C. 103(a).

Second Rejection (Claims 6 and 9 under 35 U.S.C. Section 103(a))

The Second Rejection is rendered moot by the cancellation of claims 7, 8 and 9.

Third Rejection (Claims 11-20 under 35 U.S.C. Section 103(a))

The cited Gorl reference is significantly and materially deficient for rejecting the various of

the Applicants' amended claims as being obvious under the requirements of 35 U.S.C. Section 103(a) as hereinbefore discussed and such rationale extends to claims 11 through 20.

It is to be appreciated that the Applicants' Claims 11 through 20 (of which claims 17 through 20 have been cancelled and replaced with various of new claims 21 through 24) are directed to a tire having at least one component comprised of the composite of various of the amended claims which either require that the carbon black domains contain silanol and/or siloxane domains in addition to the other required domains or exclude silanol and siloxane domains altogether.

It is not seen that Gorl teaches or suggests any carbon black having any of Applicants' other domains on its surface as is required by the Applicants' claims, and the Applicants' amended claims require that the silanol and siloxane domains are excluded or are included with the other domains on the surface of the carbon black.

Accordingly, it is contended that Gorl is significantly and materially deficient for a purpose of rejecting the Applicants' amended claims as being obvious under 35 U.S.C. Section 103(a).

The cited Mahmud reference, is similarly considered herein to significantly and materially deficient for a purpose of rejecting the Applicants' amended claims. It is not seen that Mahmud teaches or suggests any carbon black having any of Applicants' other domains on its surface as is required by the Applicants' claims.

Accordingly, it is contended that Mahmud is significantly and materially deficient for a purpose of rejecting the Applicants' amended claims as being obvious under 35 U.S.C. Section 103(a).

A combination of Gorl and Mahmud therefore does not make out a prima facie case of obviousness of the Applicants' amended claims under the requirements of 35 U.S.C. Section 103(a) without a substantial reconstruction of the Applicants' amended claims.

Fourth Rejection (Claims 2 and 4 under 35 U.S.C. 103a)

The cited Gorl reference is significantly and materially deficient for rejecting various of the

Applicants' amended claims as hereinbefore discussed and such rationale extends to the Applicants' claim 2, as amended, and claim 4 which depends from amended claim 2.

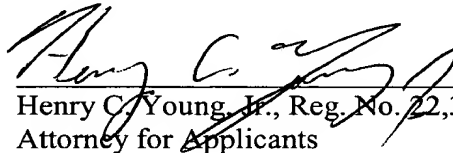
The cited Zimmer reference is similarly significantly and materially deficient for rejecting the Applicants' claims 2 and 4 and, moreover, does not correct the deficiencies of the Gorl reference.

The combination of Gorl and Zimmer does not make out a prima facie case of obviousness of the Applicants' claim 2 (amended) and dependent claim 4 under the requirements of 35 U.S.C. Section 103(a) without a significant reconstruction of the Applicants' amended claims.

Conclusion

In view of the amendments made to the claims and comments herein it is contended that the amended claims are not anticipated by Gorl (under 35 U.S.C. Section 102(b)), are not obvious in view of Gorl, Mahmud and Zimmer (under 35 U.S.C. Section 103(a)) whether applied singularly or in combination and are therefore patentably distinct from the cited references.

Respectfully submitted,


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